

Work Order ID 54149

December 1, 2009 12:42:36 PM

Page 1

Item ID: D117-762-011

Accept



Setup Start



Revision ID: A

Stop



Item Name: Skidtube

Start Date: 02/12/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 15/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: *PL*Date: *02/12/1*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
N/A	Rev A

100 DOCUMENT CONTROL 0.00



DC Memo

0.00

Document Control Photocopy bluefile & type labels per PPP D117-762-011

CHL 7/02
EHG00TPERECN 08-5714
S. Solaris*PL for BG 09/12/16*

110 Pick Kit 0.00



Packaging Memo

0.00

Packaging

PL 09/16 C

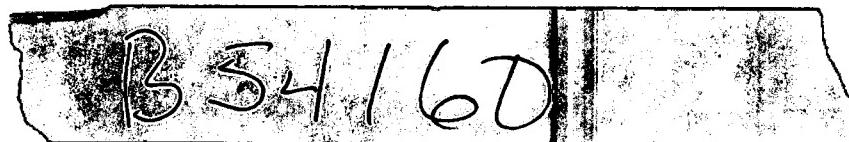
120 QC4- 100% Inspect kits for completeness 0.00



QC Memo

0.00

Quality Control



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 54149

December 1, 2009 12:42:36 PM



Page 2

Item ID: D117-762-011

Accept



Setup Start



Revision ID: A

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Item Name: Skidtube

Start Date: 02/12/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 15/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____

Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



Packaging

0.00

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D117-762-011

Location: APPP Rev: A

140



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

Poly 10/01/09

10/01/09 AF

VMF 10-01-05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

December 1, 2009 12:42:43 PM

Work Order ID: 54149



Parent Item: D117-762-011RevA



Parent Item Name: Skidtube

Start Date: 02/12/2009

Required Date: 15/12/2009

Comments:

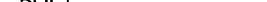
Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN3C4A	Purchased	No			120	Each	1,327.000	18.0000				
--------	-----------	----	--	--	-----	------	-----------	---------	--	--	--	--

BOLT



<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST	1327	
112314	13	
112720	12	
112724	3	
112829	44	
112991	39	
113121	216	
113226	1000	

113226

(AN6-52A)



Purchased No

120 Each

46.0000 2.0000



Bolt

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST	46	
110183	3	
111661	13	
112314	30	

111661

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 2

December 1, 2009 12:42:43 PM

Work Order ID: 54149



Parent Item: D117-762-011RevA



Parent Item Name: Skidtube

Start Date: 02/12/2009

Required Date: 15/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN960CT0L

Purchased

No

120

Each

1,844.000

8.0000

washer

ORWA51149C0332R

10/12/10

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

OFFSHORE

FG 100.

103585 100

Main Warehouse

ST 1744

112116 536

112612 342

112933 866

D3864-1RevA

Manufactured

No

120

Each

40.0000

4.0000

Bushing



<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST 40

47351 40

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 3

December 1, 2009 12:42:43 PM

Work Order ID: 54149



Parent Item: D117-762-011RevA



Parent Item Name: Skidtube

Start Date: 02/12/2009

Required Date: 15/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L6		Purchased	No			120	Each	524.0000	2.0000			

Nut

Warehouse**Location**

Main Warehouse

ST	524
105077	22
110002	5
111548	8
111578	400
112492	89



✓

PC

D117-762-041RevA

Manufactured

No

Replacement Skidtube

D3512-1RevC.

Manufactured

No

Wearplate



110

Each

0.0000

1.0000



54160

PC 10/01/05

✓

PC 9/2/16 (1)

Warehouse**Location**

Main Warehouse

ST500	7
51390	7

51390

W/O:		WORK ORDER CHANGES				
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

REFERENCE ONLY

5.0 PARTS LIST

5.1 D117-762-011 Skidtube Parts List

5

Item	Qty -011	Qty -041	Part Number	Description
	X		D117-762-011	SKIDTUBE INSTALLATION
/1	X		D117-762-041	REPLACEMENT SKIDTUBE
1	1	D3582-041		SKIDTUBE ASSEMBLY
2	2		**1121-51002	SKID SHOE
3	2		**1121-51102	CLAMPING RING
4	8		**LN9380M8X45	HEXAGON BOLT
5	8		**LN9023A8-1.4544.9	LOCKING WASHER
6	8		**LN9025-0815K	WASHER (OR LN9025-0815L)
10	1	*	D2965	CAP
11	2		***AELS-1032-225	INSERT
12	2		*AN3C5A	BOLT
13	2		*AN960C10L	WASHER
20A	1	*	D3508-9	WEARPLATE
20B	1	*	D3558-9	GASKET
21A	1	*	D3508-3	WEARPLATE
21B	1	*	D3558-3	GASKET
22A	1	*	D3508-11	WEARPLATE
22B	1	*	D3558-11	GASKET
23A	1	*	D3508-13	WEARPLATE
23B	1	*	D3558-13	GASKET
24	36		*AELS-1032-130	INSERT
25	8	28	*AN3C4A	BOLT
26	8	28	*AN960C10L	WASHER
27	2		D3512-1	WEARPLATE
30	2		*AELS-1032-130	INSERT
31	2		*AN4-4A	BOLT
32	2		*AN960JD416L	WASHER
40	2		*D3492-049	PLUG ASSEMBLY
41	2		***NAS1611-016	O-RING
42	2		*D3492-051	PLUG ASSEMBLY
43	2		***NAS1611-015	O-RING
44	6		*D3492-053	PLUG ASSEMBLY
45	6		***NAS1611-012	O-RING
50	2		AN4-51A	BOLT
51	4		D2972	BUSHING
52	2		MS21042L4	NUT (OR MS21042-4)

* PART IS INCLUDED WITH D3582-041 SKIDTUBE ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER, LISTED AS REFERENCE ONLY

*** DENOTES PART IS INCLUDED WITH ASSEMBLY ABOVE

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Revision: A
 Date: 07.04.27

REFERENCE ONLY

5.1 D117-762-011 SKIDTUBE PARTS LIST (IIN-D117-762)
32.8 D117-762-011 SKIDTUBE PARTS LIST (ICA-D117-762)

ITEM	Qty -011	Qty -041	PART NUMBER	DESCRIPTION
	X		D117-762-011	SKIDTUBE INSTALLATION
	1	X	D117-762-041	REPLACEMENT SKIDTUBE

IS:

50	2	AN6-52A	BOLT
51	4	D3864-1	BUSHING
52	2	MS21042L6	NUT (OR MS21042-6)

WAS:

50	2	AN4-51A	BOLT
51	4	D2972	BUSHING
52	2	MS21042L4	NUT (OR MS21042-4)

TO UPGRADE A D117-762-011 SKIDTUBE FROM CHG 001 TO CHG 002, THE FOLLOWING KIT CAN BE OBTAINED FROM DART:

Qty -041	PART NUMBER	DESCRIPTION
X	DSI 9435-011	GROUND HANDLING HARDWARE CHANGE
2	AN6-52A	BOLT
4	D3864-1	BUSHING
2	MS21042L6	NUT (OR MS21042-6)

DESIGN	<i>PH</i>	DART AEROSPACE USA, INC	
DRAWN	<i>PH</i>		
CHECKED	<i>b</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>N/A</i>	DSI 9435	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	GROUND HANDLING HARDWARE CHG NTS	
DATE	08.12.04	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Work Order ID 55903

February 04, 2010 10:06:23 AM



Page 1

Item ID: D117-762-011

Accept



Setup Start



Revision ID:

Item Name: Skidtube

Stop



Start Date: 02/04/2010 Start Qty: 2.00



Cust Item ID:

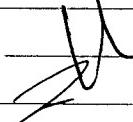
Required Date: 02/11/2010 Req'd Qty: 2.00



Customer:

Reference: NCR10-011 Re-work

Approvals: Process Plan:

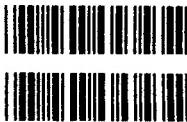


Date: 10-02-04

Tooling:

Date:

Run Start



QC:



Date: 10-02-04

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
N/A	Rev A

100		0.00	(2P)
-----	--	------	------



QC

Quality Control

Memo

0.00

Pull from stock per NCR10-011
1x B54149
1x B54150
and have re-worked.

=> m.k 10/02/16

110



Assemble as per dwg

0.00

HandFinish

Hand Finishing

Memo

0.00

-Remove the D3508-9 wearplate & re-work per attached NCR w/o sheet.
**Ensure the slot is made square: 0.300" x 0.360"(maximum) towards the centerline on the most forward holes only.

>DP

10-2-11

-Debur the wearplate & touch up grey.

Work Order ID 55903

February 04, 2010 10:06:23 AM



Page 2

Item ID: D117-762-011

Accept



Setup Start



Revision ID:

Item Name: Skidtube

Stop



Start Date: 02/04/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 02/11/2010 Req'd Qty: 2.00



Customer:

Reference: NCR10-011 Re-work

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Soler 16

(10)

130



HandFinish

Hand Finishing

Assemble as per dwg

0.00

=> M-h 10/02/16

(2X)

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Soler 16

(x2)



Work Order ID 55903

February 04, 2010 10:06:23 AM



Page 3

Item ID: D117-762-011

Accept



Setup

Start



Revision ID:

Item Name: Skidtube

Stop



Start Date: 02/04/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 02/11/2010 Req'd Qty: 2.00



Customer:

Reference: NCR10-011 Re-work

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

150



Packaging

Packaging

Operation
Description

Identify as per dwg & Stock Location:

Nov A

Set Up/
Run Hours

0.00

Draw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

Add a copy of this w/o to the original w/o's as a reference.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

See NCR 10-011

Part No: D117-762-041 PAR #: 1 Fault Category: Prod. Skidtubes NCR: Yes No DQA: Date: 10-02-04

Resolution: re-work Disposition: re-work QA: N/C Closed: Date: _____

NCR: 10-011		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10-02-04	250	Upon assembly of the D3508-9 wear plate, it was noticed that the holes in the tube were too narrow and causing the wear plate to lift in the center when tightened.	<input checked="" type="checkbox"/> 10-02-04 CDSI 042	- Drill/ig fuel hole angle slightly changed (came in) with use, due to mild O.D. crushing on the tube from bending. D78974 is Reworked.	<input checked="" type="checkbox"/> See NCR 10-011	<input checked="" type="checkbox"/> 10-02-04	<input checked="" type="checkbox"/> 10-02-04 CDSI 042	<input checked="" type="checkbox"/> 10-02-04
		R.C: Tooling.	<input checked="" type="checkbox"/> 10-02-04 CDSI 042	- On the 2 most fuel holes on the D3508-9 wearplate, slot the holes, square, to max 0.060" (or as necessary), to allow the bolts to tighten	<input checked="" type="checkbox"/> 10-2-10 S 10/02/10	<input checked="" type="checkbox"/> S 10/02/10	<input checked="" type="checkbox"/> 10-02-04 CDSI 042	<input checked="" type="checkbox"/> 10-02-04
			<input checked="" type="checkbox"/> 10-02-04 CDSI 042	- Without any bending upon the wear plate, 0.300 x 0.360" marking. & open/slot, square to 0.060" maximum towards center line. CDSI 042 - NON STRUCTURAL, ACCEPTABLE	<input checked="" type="checkbox"/> 10-2-10 S 10/02/10	<input checked="" type="checkbox"/> S 10/02/10	<input checked="" type="checkbox"/> 10-02-04 CDSI 042	<input checked="" type="checkbox"/> 10-02-04

NOTE: Date & initial all entries